

W. H. SMITH.
Vapor-Burner.

No. 126,419.

Patented May 7, 1872.

Fig. 1.

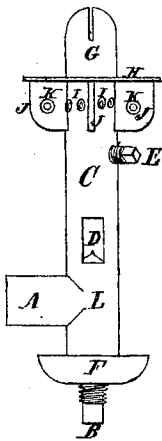


Fig. 2.

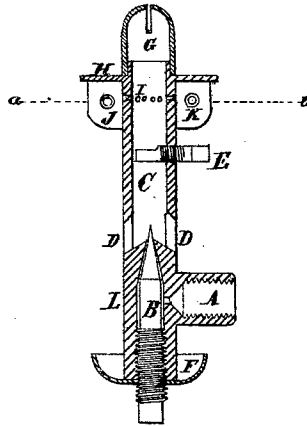
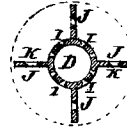


Fig. 3.



Witnesses
R. Becklen
Jos. T. R. Plank

Inventor
W. H. Smith

UNITED STATES PATENT OFFICE.

WILLARD H. SMITH, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN VAPOR-BURNERS.

Specification forming part of Letters Patent No. 126,419, dated May 7, 1872.

SPECIFICATION.

I, WILLARD H. SMITH, of the city of Brooklyn, in the county of Kings and State of New York, have made certain new and useful Improvements in Vapor-Burners, of which the following is a specification:

Nature and Object of the Invention.

This invention consists in providing the burner with several vertical wings under its heating-button or plate and around its mixing-chamber, to protect the jets for heating against wind and becoming extinguished in using the burner outdoors.

In the drawing annexed, Figure 1 represents a side elevation of the burner. Fig. 2 is a vertical section of the same. Fig. 3 is a horizontal section taken through the jets and wings of the burner.

Similar letters of reference indicate corresponding parts in the several figures.

A represents the socket and B the valve of the burner. C is the mixing-chamber; D, the air-supply passage to it; E, its regulating-screw; F, the waste-cup; and G, the tip of the burner, which is fitted over the top end of the mixing-chamber, on which is also formed the usual button, H, or heating-plate, under which the jet-holes I I are located. Under the button H are several wings, J J, which connect, on their top end, with said plate, and project radially, and are equally distributed around the mixing-chamber D, so that the jets which protrude from the mixing-chamber are on each side protected from wind by means of the said wings, which guard them, and which divide the space in which the jets are employed around the mixing-chamber into several compartments under the heating-plate H; and I

provide each of these wings with one or more perforations, K, in about horizontal level with said jet-holes, to permit the flames of the jets to meet in said perforations K, and thereby cause said wings to heat very highly, and, in consequence, encourage the combustion of the vapor and produce a very brilliant flame.

In order to manufacture this burner at a limited expense, I mold and form the mixing-chamber C, said button H, and the wings J J, as well as the socket A, for attaching the burner to the wick-tube, and also the valve-chamber L, which contains the valve B, all in one piece of casting, so that in the manufacture of the burner the said casting simply requires to be drilled, tapped, and fitted, to receive the valve B, the screw of the wick-tube, the waste-cup F, the regulating screw E, the tip G, and to provide for the holes in the wings J J, and for the jet-holes I I.

It will be observed, by means of the perforations K K in the wings J J, the bases of the jets are, although separated to a degree, still connected, and are thereby capable of communicating, in case of being extinguished by wind, so that those jets on the off side of the wind are enabled to ignite the jets on the wind side as soon as the wind subsides.

Claim.

The perforations K K in the said wings J J, substantially as and for the purposes herein shown and described.

In witness whereof I hereunto set my hand this 8th day of December, 1871.

W. H. SMITH.

In presence of—

R. BOEKLEN,

JOS. T. K. PLANT.